



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/864,064	05/23/2001	Dale K. Bell	60130-1113/01MRA0253	1970

26096 7590 10/07/2002

CARLSON, GASKEY & OLDS, P.C.
400 WEST MAPLE ROAD
SUITE 350
BIRMINGHAM, MI 48009

EXAMINER

ECHOLS, PERCY W

ART UNIT	PAPER NUMBER
----------	--------------

3726

DATE MAILED: 10/07/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/864,064

Applicant(s)

BELL, DALE K.

Examiner

P. W. Echols

Art Unit

3726

-- The MAILING DATE of this communication appears on the cover sheet with the correspond nce address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) 10-15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: ____.

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-9, drawn to methods of forming a differential assembly, classified in class 29, subclass 893.2.
 - II. Claims 10-15, drawn to a differential assembly, classified in class 74, subclass 607.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product as claimed can be made by another and materially different process such a process where the case is cast separately and then mounted to the ring gear where the mounting portion is inserted into the cast portion.
3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.
4. During a telephone conversation with Mr. Gottschalk and Examiner Luong on July 23, 2002 a provisional election was made with traverse to prosecute the invention of I, claims 1-9. Affirmation of this election must be made by applicant in replying to this Office action. Claims 10-15 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Art Unit: 3726

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-4 and 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stritzel (4,512,211) in view of Hempel (6,058,794) and Kovach et al. (4,949,456).

Stritzel teaches that it was known to cast a one-piece housing and attach a ring gear to it. Hempel teaches that it was known to cast a gear onto a hub. Kovach et al. teach that it was known that ring gears are commonly made from forged steel to provide them with strength and durability not available when the gear is cast (col. 1, lines 23-26). In view of the teaching of Hempel and Kovach et al one of ordinary skill would have been motivated to modify the process of Stritzel to simplify the assembly process by casting one component to another as taught by Hempel and in view of Kovach's teaching to provide a strong and durable gear by casting the casing around the gear. Official Notice is taken of near-net forging as a technique to reduce machining. Official Notice is also taken of machining housings. Kovach teaches that it was known to machine and induction harden gear teeth (Col. 5, lines 13-21).

7. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stritzel in view of Hempel and Kovach et al as applied to claim 1 above, and further in view of the admitted prior art.

Art Unit: 3726

At page 1 of the specification, the last line of the third paragraph it is taught that it was known to use ductile iron for casting a housing.

8. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stritzel in view of Hempel and Kovach et al. as applied to claim 1 above, and further in view of Saito et al. (4,620,507). Saito et al. teach that it was known to use projections to provide interlocking elements for melt. It would have been obvious to one of ordinary skill in the art to modify the process to include projections to more firmly attach the gear to the housing.


9. Irwin (6,010,424) teaches casting a housing and gear together.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to P. W. Echols whose telephone number is 703-308-1802. The examiner can normally be reached on M-F 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Hughes can be reached on 703-308-1806. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3579 for regular communications and 703-305-3579 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1802.

pwe
October 1, 2002



P. W. Echols
Examiner

P. W. Echols
Primary Examiner